

CLAIM STATUS

This Amendment is submitted in response to the Office Action dated May 21, 2004, having a shortened statutory period set to expire August 21, 2004. Claims 1-15 are pending. Applicant has amended Claims 1 and 4, and canceled Claims 3 and 9-11. No new matter has been entered by these amendments.

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AMENDMENTS IN THE CLAIMS

1. (currently amended) A disk drive apparatus, comprising:
 - a disk like medium for storing data;
 - a head that reads data from and writes data to the disk like medium, wherein the head performs a seek operation for moving to a designated location on the disk like medium and a follow operation for reading or writing data when staying at the location;
 - an actuator ~~which~~ that moves the head to a designated location on the disk like medium;
 - and
 - a position control unit ~~which~~ that positions the head by controlling a drive of the actuator[[;]], the position control unit comprising:
 - a first integrator ~~which~~ that generates a first gain and operates during the seek operation; and
 - a second integrator ~~which~~ that generates a second gain that is larger than the first gain and operates during the follow operation.
2. (original) The disk drive apparatus according to Claim 1, wherein the first integrator and the second integrator are connected in parallel.
3. (canceled)
4. (currently amended) The disk drive apparatus according to Claim [[3]] 1, wherein:
 - a switching unit is provided between the first integrator and the second integrator;
 - the first integrator operates when the switching unit closes during the seek operation; and
 - the second integrator or both first integrator and second integrator operate when the switching unit opens during the follow operation.
5. (original) A disk drive apparatus, comprising:
 - a disk like medium for storing data;
 - a head which performs a seek operation for moving to a designated location on the disk like medium and a follow operation for reading or writing data staying at the designated location;

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an actuator which moves the head to the designated location on the disk like medium; and

a position control unit which positions the head by controlling an operation of the actuator; wherein the position control unit comprises:

an integrator which generates a corresponding first gain during the seek operation and a second gain different from the first gain during the follow operation.

6. (original) The disk drive apparatus according to Claim 5, wherein the second gain is larger than the first gain.

7. (original) The disk drive apparatus according to Claim 5, wherein the integrator comprises a first integrator which generates the first gain and a second integrator which generates the second gain.

8. (original) The disk drive apparatus according to Claim 5, wherein the integrator switches from the first gain to the second gain when a change from the seek operation to the follow operation takes place.

9-11. (canceled)

12. (currently amended) A hard disk drive, comprising:

a magnetic disk on which servo information is stored;

a magnetic head ~~which~~ that seeks the magnetic disk and reads or writes data staying at a designated location;

an actuator ~~which~~ that moves the magnetic head to the designated location on the magnetic disk; and

a head position control unit ~~which~~ that controls the position of the magnetic head based on the servo information read out by the magnetic head and ~~which~~ that comprises an integrator[[:]], wherein:

the integrator generates a first gain and a second gain larger than the first gain, the first gain being generated when the magnetic head does not read or write data and the second gain being generated when the magnetic head reads or writes data.

13. (original) The hard disk drive according to Claim 12, wherein the first gain is generated when the magnetic head is seeking.

14. (original) The hard disk drive according to Claim 12, wherein the integrator is composed of a first integrator which generates the first gain and a second integrator which generates the second gain.

15. (original) The hard disk drive according to Claim 12, wherein the integrator generates the first gain and second gain, switching between them.